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ABSTRACT

Noting that although dental disease is preventable, dental decay is still the most common and costly oral health problem among children, this special Kids Count report presents information on oral health and the role of prevention and the problem of poor oral health in Arkansas. Included in the report is information on the obstacles in accessing oral health care in the state, noting that the problem is most pronounced in rural areas and for children in low-income families. State maps detail the number of licensed dentists for each county, the number accepting Medicaid payment, and the number of counties with communities having either natural or adjusted fluoridation. Statistics on the following oral health indicators are presented for Arkansas and for the nation as a whole: (1) sealant rate; (2) proportion of the population visiting the dentist in the past year; (3) fluoridation status; (4) proportion having professional teeth cleaning in the past year; and (5) dentists per person. The report notes that Arkansas' oral health indicators are slightly worse than their national indicators but considerably worse than the goals of Healthy People 2010. The problems of access to dental care and water fluoridation are discussed, and potential solutions to the oral health emergency are delineated. The report concludes with a description of a model program and acknowledgments. (Contains 25 endnotes.) (KB)

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TOO FEW VISITS TO THE DENTIST?
The Impact on Children's Health

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A Special Report from
Arkansas Advocates for Children & Families

February 2002

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TOO FEW VISITS TO THE DENTIST?
The Impact on Children's Health

What Is Oral Health?

"Oral" is Latin for mouth – teeth, gum and supporting structures.

"Good oral health" is the absence of pain, disability and/or diseases in the mouth, face and its supporting structure.

Although dental disease is preventable, dental decay is still the most common and costly preventable oral health problem in all age groups. Poor oral health conditions originate in childhood and can worsen without proper care and treatment.

Why is Oral Health Important?

Research has shown the significance of oral health to physical and psychological health. Overall, oral disabilities affect one's quality of life.

- Oral disabilities hinder social interaction and can lead to stress and depression.
- Self esteem, the ability to eat and speak, facial appearance, and daily living free of dental discomfort all depend heavily on oral health.[1] Oral disorders can also affect breathing and swallowing.
- Left untreated, the pain and infection caused by dental decay can lead to problems in eating, speaking and learning.[2]
- Very young children with tooth decay weigh significantly less than their peers.[3] Chronically poor oral health is associated with diminished growth in toddlers,[4] compromised nutrition in children,[5] and cardiac and obstetric dysfunction in adults,[6]
- Almost 52 million school hours are missed annually by children because of oral problems.[7] Hence, oral disorders affect educational attainment.

How Big is the Problem?

Those with poor oral health are disproportionately low-income, and more likely to be a child or an elderly adult. Members of minority groups also experience a disproportionately high level of oral health problems. Those with disabilities and complex health conditions are at greater risk for oral diseases that, in turn, further complicate their health.

Other statistics show:

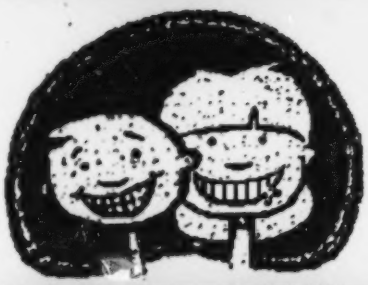
- Children from low-income families have five times more untreated dental decay than children from high-income families.[8]
- Five to 10 percent of pre-school-aged children have decay. The rate is 20 percent for children in low-income families and 43 percent in some American Indian populations.[9] Decay is caused by frequent and prolonged exposure of the teeth to sugar and certain oral bacteria.
- More than a half of all children ages 6-8 and two-thirds of all 15-year-olds experience dental decay.[9]
- For more than a quarter of children, the trip to the emergency room is their first dental visit.[10]

What Role Does Prevention Play?

Prevention is a vital aspect of oral health. Most dental diseases in children are preventable. Teaching a child to practice good dental hygiene can prevent most childhood dental diseases. Education is an important component of preventive oral health care.

Many communities still do not realize that oral health is essential to physical, social and psychological well-being. Drinking fluoridated water and having dental sealants has been identified as the most potent weapon against cavities.

Oral health care should begin before birth. Babies' teeth are formed in the second trimester of pregnancy. At birth, all 20 primary teeth are already completely formed in the jaw. It is important for pregnant women to eat foods that contain calcium. Calcium makes babies teeth and bones strong.



PREVENTIVE
ORAL HEALTH

The Problem in Arkansas

Oral health in Arkansas is in a dire state. Arkansas was recently graded "D," along with nine other states.[12] Forty other states were graded "C-" or above.

The cost of oral disease *prevention* is trivial compared to the cost of treating oral diseases. The average cost of sealing a tooth against decay is $20. The average cost of one filling -- to repair a decayed tooth -- is $66. These are affordable prevention meaures. Arkansas can no longer use "poor and rural state" as an excuse to avoid addressing barriers to oral health.

Although oral health care is an integral part of overall health care, Arkansas children still face major obstacles in accessing oral health care. Problems faced by the general child population are:

- The number of uninsured children is increasing, especially in families with mid-level incomes. Most private health insurance plans have limited or no dental coverage and do not have oral health parity.
- Insured children with dental coverage still face an additional barrier – getting an appointment with the local dentist. This issue is more pronounced in the Medicaid population, since most dentists (64%) do not accept this type of insurance.

Rural vs. Urban

The overall oral health system for children in Arkansas is in a state of emergency. The problems are more pronounced in rural areas. Although more than 46 percent of Arkansans live in rural areas, 54 percent of dentists are concentrated in seven metropolitan cities, where only 19 percent of Arkansans live:

- 252 dentists in Little Rock (Pulaski)
- 78 in Fayetteville/ Springdale (Washington)
- 72 in Fort Smith (Sebastian)
- 69 in Rogers/ Bentonville (Benton)
- 53 in Hot Springs (Garland)
- 41 in Jonesboro (Craighead)
- 33 in Pine Bluff (Jefferson)

Oral health problems range from lack of awareness about the importance of prevention and treatment to limited access to dental professionals and service.

- A shortage of dentists exists in the state. Dentists are concentrated in urban areas hence heightening the shortage in rural areas.
- Arkansas' rural populations tend to be self-employed and are less likely to be able to afford health insurance, especially one with dental coverage, for their family.

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- Other barriers are also linked to socio-economic status like inconvenient times for dental appointments, inability to pay out-of-pocket expenses, lack of transportation, and inability to take time off work. These barriers are experienced more by Arkansas' rural population.

Low-income Children

Research proves children living in low-income families fare woefully when seeking and accessing oral health. More than half -- over 400,000 Arkansas children -- live at or below 200 percent of poverty. All children living at or below this poverty level qualify for the state's Medicaid insurance program, but most dentists don't accept this type of insurance.

The state's Medicaid-mandated Early Periodic Screening Diagnosis Treatment program (EPSDT) is not making up for this gap either. Less than 1 percent of children eligible for EPSDT received dental care through the program in FY 2000. Dental expenditures constitute less than 2 percent of the medical expenditures of Arkansas' Medicaid program in the same period.

The other source of care for those with low incomes is Community Health Centers (CHCs). Currently, only six of the 42 CHCs in Arkansas have dentists on staff; the remaining 36 centers serve clients through a voucher system.[13]

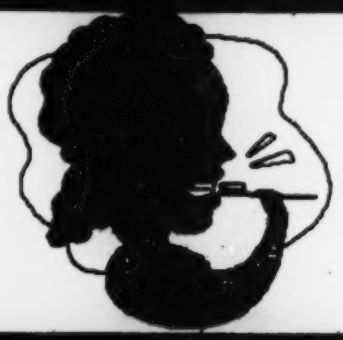
Arkansas Statistics

Arkansas lags behind national averages in oral health measures. Two commonly used oral health indicators are sealant usage and decayed, missing or filled teeth (DMF).

- Only 17%[14] of Arkansas children have sealants on their teeth while the corresponding national rate is 23%.[15]
- Also, children in Arkansas have an average of 2.34 decayed, missing or filled teeth.[16] No national data is available.

Oral Health Indicators

	AR	US	Healthy People Goal
Sealant Rate	17%	23%	50%
Dental Visits: Population visiting the dentist during past year[41]	58.9%	67.9%	n/a
Fluoridation Status: Population receiving fluoridated public water[42]	58.7%	69%	75%
Teeth Cleaning: Population having teeth professionally cleaned during past year[43]	59.7%	62.1%	n/a
Dentists per Person	2,446	1,700	n/a



DENTAL HEALTH & NUTRITION

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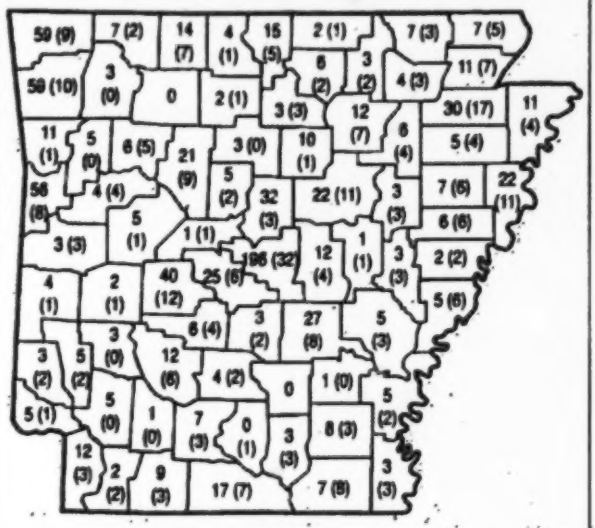
Distribution of Dentists



Number of Dentists Licensed w/in the County
(#) Number of Dentists Accepting Medicaid*

*These dentists receive at least $1,000 a year in Medicaid reimbursements.

Communities with Fluoridated Water

Have Communities with Natural Fluoridation
Communities with No Fluoridation
Have Communities with Adjusted Fluoridation

Although Arkansas' oral health indicators seem only slightly worse in comparison to national indicators, the true state of oral health in Arkansas is reflected in how these indicators compare to the goals of Healthy People 2010. Healthy People 2010 is a set of health objectives for the nation to achieve in the next 10 years. The initiative challenges individuals, communities and professionals to take specific steps to ensure that good health and long life are enjoyed by all. It is a project of the federal Department of Health and Human Services.

The indicators measure the state averages to rural and urban differences to show the prevalance of poor oral health in children. The significant inequity in rural-urban access to oral health care in Arkansas implies rural oral health indicators will be significantly worse off. And, as with any other health issue, children with disabilities are at even greater risk for having problems with oral health and access to care.

Currently, Arkansas has no state oral health plan, but the Arkansas Health Department Office of Oral Health is considering the development of one.

Access

In 2000, only 392 of the 1,110 Arkansas dentists billed for reimbursement from Medicaid. This suggests there were approximately 600 Medicaid children to each participating dentist. Current data does not indicate the actual number of children receiving care by these dentists or the number of times children visited these dentists.

Western Arkansas has more dentists than eastern Arkansas. However, a higher percentage of dentists in eastern Arkansas accept Medicaid patients compared to western Arkansas.

In Arkansas, 1,869 dental assistants and 855 dental hygienists are licensed to practice. Both groups of professionals have to perform nearly all their dental duties under the direct supervision of a dentist. Other states, like Connecticut, New Hampshire and New York, are resolving the problem of few dentists and/or lack of access to oral health care by widening the role dental hygienists[34] play in public health settings.

Water Fluoridation

Fluoride is a naturally-occurring element that prevents tooth decay. Fluoride can prevent tooth decay by two methods:

- Systemically, when fluorides are ingested into the body during tooth formation; and
- Topically, when fluorides such as toothpastes, mouth rinses and professional treatments are applied to the teeth.

Water fluoridation is the adjustment of the fluoride concentration in the water to the level recommended for the prevention of dental decay. The recommended level for Arkansas is 0.8 parts per million (ppm). Recommended fluoride concentrations vary by state, region and/or climate. Fluoride can occur naturally in water. In those

situations, water with more than 0.6 ppm of naturally-occurring fluoride is acceptable.

Community water fluoridation is the most economical way to deliver the benefit of fluoride to all residents of a community. It is an essential component of preventing tooth decay because it "remineralizes"[28] the teeth of people of all ages. Living in communities with a non-fluoridated water supply places residents at higher risk for tooth decay.

In Arkansas, a significant number of communities still do not have access to fluoridated water. The decision to fluoridate is made at the local level and some communities have elected not to fluoridate the water. Twelve percent of Arkansas' water supply is from privately-owned wells. Usually, well-water cannot be fluoridated; but in cases where the well water can, the well owner determines whether or not to fluoridate.

Most of Arkansas' un-fluoridated communities are in the western region. Fifty counties have at least one community with adjusted fluoridation level of between 0.6 to 1.2ppm. Five additional counties have natural fluoridation. Twenty counties have no communities with a fluoridated water source. Overall, only 58 percent of Arkansans live in communities with fluoridated water, compared to 62 percent nationally and a national goal of 75 percent.

Solving the Problem in Arkansas

Oral health is vital to the psychological, physical and emotional well being of our children. Solutions do exist to Arkansas' oral health emergency:

- Parents, dentists, communities and government agencies need to recognize the importance of oral health.
- More education needs to be available on the importance of good oral health care for parents and children.
- Oral health education should be incorporated into other existing preventive health programs, such as prenatal care and the federal Women, Infants and Children (WIC), a nutrition program for pregnant women.
- Communities should be aware of the benefits of fluoridated water.
- Arkansans should encourage their dentists to see more children with Medicaid insurance.
- Collaborations need to be formed with schools, communities, dentists and other needed parties to provide oral health care to children in the state.
- The state needs to carefully evaluate how to better utilize the services of other dental professionals to reach underserved children.
- The state needs to develop a strategic plan to increase the number of dentists in the state and their participation in the Medicaid insurance program.

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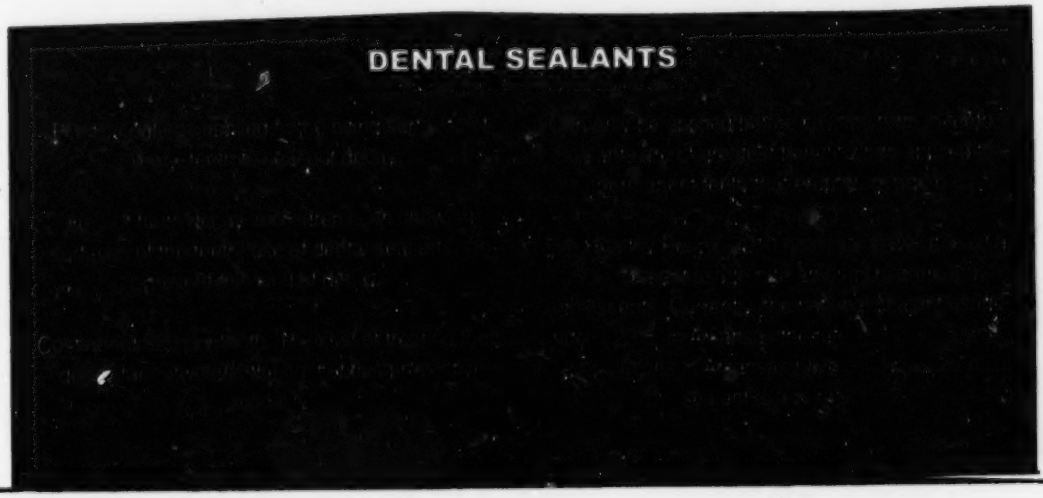

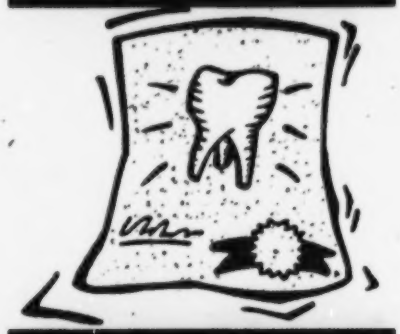

MODEL PROGRAM

Acknowledgments

February 2002

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Arkansas Advocates for Children & Families is a non-profit, non-partisan, child advocacy organization founded in 1977. It is AACF's mission to promote and protect the rights and well-being of Arkansas' children and their families, to assure they have the opportunities to lead healthy and productive lives. We research, educate, debate, dialogue, compromise and rethink children's issues to create sounder public policies for Arkansas' children and their families.

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Designed by Julie C. Robbins
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Endnotes

[1] Pediatric Dental Disease: A critical Marker for Children's Overall Health – Burton L. Edelstein.

[2] U.S. General Accounting Office. 2000. Oral Health: Dental Disease is a Chronic Problem Among Low-Income Populations and Vulnerable Populations. Washington, DC: U.S. General Accounting Office.

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[8] Promoting Awareness, Preventing Pain: Facts on Early Childhood caries – Amy Self, National Maternal and Child Oral Health Center.

[9] U.S. Department of Health and Human Services, National Center for Health Statistics. 1997. Healthy People 2000 Review 1997. Hyattsville, MD: National Center for Health Statistics, U.S. Department of Health and Human Services.

[10] Sheller B, Williams BJ, Lombardi SM. Diagnosis and treatment of dental caries-related emergencies in a children hospital. Pediatric Dentistry 19(8):470-475

[11] By age 2 children can brush with a pea-sized toothpaste under supervision.

[12] Missing the Mark – Oral Health in America, fall 2000. the Oral Health America National Grading Project.

[13] Clients pay a sliding fee and are given a voucher which can be used with any participating local dentist or at other CHCs.

[14] Arkansas Department of Health's 2001 statewide Dental Needs Assessment Survey

[15] National Health And Nutrition Examination Survey III

[16] 2001 Dental Screening Report, Lynn Douglas Mouden .

[17] Siegal MD, Farquhar CL, Bouchard JM. 1997 Dental Sealants: who needs them? Public Health Reports 112(2):98-106

[18] Arkansas Oral Health Needs Assessment Survey.

[19] 2001 Dental Screening Report, Lynn Douglas Mouden

[20] This is the repair of tooth enamel in areas that have been demineralized by acids.

[21] Data source: BRFSS (1999)

[22] Data Source: Fluoridation Census (1992)

[23] Data source: BRFSS (1999)

[24] These states allow dental hygienists in schools and some other public health setting to provide some cleanings, fluoride, sealants and oral screenings without the direct supervision of dentists.

[25] A child has to be living at 100% and 185% of poverty level to qualify Free and Reduced Lunch Program respectively. This means the child is eligible for Medicaid too.

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